

ABSTRACT OF THE DISCLOSURE

DEDICATED APPARATUS AND METHOD  
FOR EMISSION MAMMOGRAPHY

The present invention is an apparatus for examining a body part. The apparatus comprises a mechanism for immobilizing and compressing the body part. The apparatus also comprises a mechanism for providing an internal anatomical image of the body part and a mechanism for detecting single gamma-rays emitted by a radiotracer infiltrated into the body part. The detecting mechanism is disposed in an adjacent relationship with the mechanism for providing an internal anatomic image so that the body part remains in the same position during and between anatomic and radiotracer imaging. In one embodiment, the detecting mechanism includes a detector module disposed on one side of the immobilizing mechanism. The detector module preferably has at least one array of gamma ray sensitive material in communication with a position detector. In another embodiment, the detecting mechanism includes a pair of detector modules disposed one on each side of the immobilizing mechanism. The present invention is also an apparatus for examining a body part which comprises a mechanism for immobilizing and compressing the body part and a mechanism for providing a stereotactic internal anatomical image of the body part. The apparatus also comprises a mechanism for providing a stereotactic physiological image of the body part in an adjacent relationship with the mechanism for providing an internal anatomic image such that the body part remains in the same position during and between stereotactic anatomic and radiotracer imaging.